BMW Group

January 18, 2019

Marlene H. Dortch Secretary Federal Communications Commission 445 12th Street SW Washington, DC 20554

Re: 5GAA Petition for Waiver to Allow Deployment of Cellular Vehicle-to-Everything (C-V2X) Technology in the 5.9 GHz Band; GN Docket 18-357

Dear Ms. Dortch:

BMW of North America supports the recent request ("Waiver Request") made by the 5G Automotive Association ("5GAA") to deploy Cellular Vehicle-to-Everything ("C-V2X") technology in a 20 MHz channel located in the upper edge of the 5.850-5.925 GHz ("5.9 GHz") band. Granting the Waiver Request will serve as an important first step in clearing the path for near-term C-V2X deployment, unlock new investment and innovation in this technology, as well as enabling America to retain its position as a global leader in the development of C-V2X.

We believe the widespread rollout of C-V2X is a foregone conclusion, given the numerous benefits today and the capacity for the technology to evolve to enable benefits we cannot yet imagine. The timing of deployment and full appetite for investment today is clouded by the regulatory uncertainty surrounding the rules for the 5.9 GHz band, which preclude operations by C-V2X technology in the band. If the Federal Communications Commission grants the Waiver Request, it would provide the certainty necessary for industry to solidify plans for widespread deployment and unleash investment that will help to develop additional functionality and features of C-V2X services.

Roberto Rossetti VP Engineering

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E-Mail Roberto,Rossetti@brrwns.com Today, network-connected vehicles offer consumers a host of features that are enhancing safety, convenience, and peace of mind for road users and their loved ones. For example, connected vehicles are enabling:

- Emergency service applications that connect drivers with roadside assistance, provide automatic crash notifications, and track stolen vehicles;
- Safe driver applications that deliver information to the driver such as hazard warnings and inclement weather,







The demand for these and other network-connected services led BMW to equip all of its vehicles with cellular connectivity, known as ConnectedDrive, beginning over a decade ago. ConnectedDrive services are delivered over secure and reliable networks deployed and maintained by private sector investment. Network-connected vehicles are leveraging these investments through the ongoing development of new features and services that will profoundly benefit the transportation sector. Future investments in 5G infrastructure and C-V2X technologies will build upon this work to create a virtuous cycle of connected mobility innovation.

C-V2X technology fits seamlessly into this connected transportation ecosystem with two modes of vehicular communications: network mode and peer-to-peer mode. While network mode enables the types of vehicle-to-network communications referenced above, peer-to-peer mode enables direct vehicle-to-vehicle, vehicle-to-roadside infrastructure (e.g., traffic lights), and vehicle-to-vulnerable persons (e.g. pedestrians and cyclists) communications that do not travel through the network. These 5G peer-to-peer mode communications hold the potential to enable important and significant improvements in safety, traffic efficiency, mobility, and energy efficiency on America's roads. Moreover, peer-to-peer mode C-V2X was developed with an evolution path to 5G, which will greatly improve the capabilities of C-V2X in the very near future.

The FCC can enable the advancement of C-V2X in the United States by granting 5GAA's waiver request. C-V2X represents the future of mobility connectivity. Granting the waiver request affords interested stakeholders in the United States the flexibility to further invest and innovate in a technology that is being adopted around the world.

Sincerely.

BMW of North America, LLC

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Roberto Rossetti

Vice President Engineering